

**REMARKS**

The Office Action of August 10, 2005, and the cited art have been carefully considered. The application has been amended to eliminate unnecessary limitations and to correct grammatical and similar errors. Reconsideration of the rejection of the application is respectfully requested based on the amendments and following discussion.

New claims 19 to 24 have been added. Support for the claims exists generally throughout the specification and drawings.

**OBJECTIONS**

1. The drawings were objected to for not showing every feature specified in the claims. In particular, "electrically insulating guides with progressively narrower diameters" was pointed to.

"Electrically insulating guides with progressively narrower diameters" are shown in FIG. 9 as items 964 and 966 and in FIG. 12 also as items 964 and 966. Items 964 and 966 are referred to in the specification as "insulating guides." At the bottom of page 8, guides 964, 966 are described as being conical sections that conformally fit in funnel shaped passages.

It is believed that the claimed feature is both shown drawings and described in the specification. Withdrawal of the objection is respectfully requested.

2. Claims 6-17 were objected to for misnumbering.

While the Examiner stated the claims 6-17 were renumbered, for clarity, the original claims 6-17 are re-presented and amended as claims 6-18. Dependencies of claims 14-18 have been corrected.

3. Claim 8 was objected to for the fragment "Not shown?"

The claim has been amended. The feature is actually shown.

4. Claim 9 was objected to as a fragment.

The claim has been canceled.

### **REJECTION 112**

5. Claim 5 was rejected under 35 USC 112 second paragraph.

Claim 5 has been amended.

### **REJECTION 102:**

6. Claims 1 - 17 were rejected under 35 U.S.C. 102(b) as anticipated by English US 2003/0063476.

English '476 fails to provide a *prima facia* case of invalidity under 35 U.S.C. 102, since English '476 fails to show, suggest, state or claim a limitation included in Applicant's claims.

Regarding claim 1, English '476 first fails to teach "*... a heat conductive plate with a first side and a second side...*" as claimed in claim 1.

English '476 shows in FIG. 1 a unitary hollow metal column 20 with a beveled head. Mounted on the bevel head are either packaged LEDs (22) or chip on board structures (FIG.s 2 and 3). English '476 alternatively shows in FIG. 10 a solid metal column. English '476 does suggest at the end of paragraph 20 that "The head may be formed as a separate disk with a sloped surface that is populated with LED chips by rotating it on an assembly lathe." In FIG. 9 of English '476, a star shaped structure is shown comprising "a flexible dielectric mounting 120 for a circuit of LED chips." Such flex-board material is known in art as a thin plastic substrate supporting metal traces. English '476 takes advantage of this flexible plastic in several alternatives. The star shaped structure is wrapped on the head of the solid column as seen in FIG. 10. Alternatively, a band of flex-board to wrap around the column 110 in FIG. 8. In a further alternative, shown in FIG. 7, chip on board mountings are made directly on the support column. English '476 therefore shows two general mounting methods. One is to wrap

the heat sink column with a flexible plastic structure. The second method is to form the chip on board pad and trace structures directly on the solid heat sink. In both cases the integrity of the heat conductive column is preserved, likely to maximize the heat sink performance. In no instance are LEDs mounted on one side of a plate, where that plate is then mounted to the heat-sinking column. English '476 does not point out the difficulties of directly mounting LEDs on a solid column, nor does English '476 make obvious the manufacturing advantages mounting the LEDs in any other fashion. English '476 does not mount LED's on a flat carrier plate. English '476 does not teach a heat conductive plate that can be integrated with a heat-sinking column. The manufacturing importance of putting the LEDs on a heat conductive plate is unappreciated, and not disclosed or made obvious by English '476.

Regarding claim 3, English '476 fails to teach, "...the heat conductive plate includes at least one tab supporting at least one LED..." English '476 does not teach tabs formed on a plate, bent and fixed to point the LEDs. The plastic flex-board structure shown in FIG. 10 of English is floppy and is not solid in the sense of being rigid as is implied in the Applicants' metal or PCB board structures. English '476 does not disclose a heat conductive plate. English '476 does not disclose a solid heat conductive plate. English '476 does not disclose a solid heat conductive plate with a tab. English '476 does not disclose a solid, heat conductive plate with a tab that can be bent so as to retain the bent position.

Regarding claim 4, English '476 fails to show a solid heat conductive plate with a tab having a fixed angle to the axis. English shows a floppy plastic star.

Regarding claims 5-8, 10-11, the same remarks regarding claim 1 apply.

Regarding claim 12, English does not show or suggest a recess to reflect light from the LED.

Regarding claim 13, the same remarks regarding claim 1 apply.

Regarding claim 14, the same remarks regarding claim 1 apply. English '476 shows leads 62, and 64 passing free form through a metal cylindrical column. There are no "electrically insulating guides" shown. There are no "electrically insulating guides with progressively narrower diameters" in English '476. There are no guides for the leads in the stem at all. There is no teaching in English '476 of how to practically insulate and funnel the leads through heat conducting stem to correctly meet the circuit pattern formed on the heat conductive plate. English '476 presents no suggestion to funnel stiff leads over a distance to accurately mate with a plate for electrical connection.

Regarding claims 14-17, the same remarks regarding claim 1 apply. Further, there is no suggestion in English '476 to form the stem surface with diffusing features (claim 17) or with absorbing features (claim 18).

Withdrawal of the rejection and reconsideration of the rejected claims are therefore respectfully requested.

REJECTION 103:

2. Claim 18 was rejected under 35 USC 103 over English '476 in view of Martin US 2003/0227774.

The rejection of Claim 18 as being unpatentable under 35 U.S.C. 103 as being obvious over English '476 in view of Martin '774 is respectfully traversed and reconsideration thereof is requested.

Martin '774 shows an array of LEDs mounted on the side of a stem extending axially in a reflector. The LEDs are not mounted on a plate. The surface (not a plate) supporting the LEDs does not extend transversely from the stem. Martin '774

specifically teaches and claims aligning the LED arrays to parallel the lamp axis, whereas the Applicant specifically arrays them on a plate that is transverse to the axis. Martin '774 does suggest using a darkened stem to absorb light, but Martin '774 does no make up for the deficiencies in English '476. Martin '774 and English '476 in combination do not show, teach or suggest a heat conductive plate transversely couple to a heat conductive stem.

It is believed that a full and complete response to the Office Action has been made, that the Application as amended is patentably distinct over the cited art, and that the case is now in condition to be passed to issue. Reconsideration of the amended application is therefore requested, and an early favorable notice of allowance is courteously solicited.

Respectfully submitted,

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